Amendments to the Specification:

Please replace paragraph **[0017]** with the following amended paragraph:

The response to a unit step input to a model lossy transmission line having per unit length inductance, capacitance, and resistance is given ~~by Equation 1~~ <u>as described below</u>. ~~As shown by Equation 1,~~ <u>In one embodiment,</u> the response of such a line to a unit step input has two components. The first component of the response is a step function that is attenuated exponentially with distance from the beginning of the line. The second component of the response is dominated by the RC components of the line as the length of the line increases. This means that the delays and rise times are determined more by the RC components than by the time-of-flight delays for longer lines and for on-chip interconnections at higher frequencies. ~~Equation 1 shows that~~ <u>Thus,</u> the greater the resistance in comparison to the characteristic impedance, the more accurately the line may be modeled by an RC network. Therefore, using an RC network to emulate an IO interface interconnection is most appropriate and beneficial for high-speed circuits with lengthy interconnections.